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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,178	09/27/2004	Manfred Heim	2732-146	5202

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EXAMINER

SHEWAREGED, BETELHEM

ART UNIT	PAPER NUMBER
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1774

NOTIFICATION DATE	DELIVERY MODE
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07/16/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

Office Action Summary

Application No.

10/509,178

Applicant(s)

HEIM ET AL.

Examiner

Betelhem Shewareged

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 16-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 16-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's response filed on 05/01/2007 has been fully considered. Claim 1 is amended, claims 15-37 are canceled, claim 37 is added, and claims 1-14 and 16-36 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-14 and 16-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaule et al. (US 6,146,773) in view of Hofmann et al. (US 4,791,017), Witzman et al. (US 6,202,591 B1) and Applicant's admission.

4. Kaule discloses a security document with an embedded security thread (col. 2, lines 59-67 and Fig. 1). The security thread consists of a magnetic layer of iron or nickel, which is applied to a paper by resistance heating or electron beam evaporation (col. 3, lines 2-5, 16-19 and 39-42). In addition, the magnetic layer of iron or nickel can be coated with a further metallic layer, e.g. of a copper alloy, so as to bring about golden color effects (col. 4, lines 2-13). The claimed foreign metal is equivalent to any impurity that is contained in the alloy. Kaule does not expressly disclose how the colored metallic layer is produced, however, it can be expected that the layer is produced with the same method as the layer of iron, that is, using resistance heating or

electron beam evaporation. Claims 2-5, 8-11, 13, 17-20, 23-25 and 27-35 do not appear to contain any additional features which, could lead to a subject matter that is novel. In fact, these claims relate to features which are either wholly standard in the art or lie within the scope of expert ability. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

5. Kaule does not teach specific types of copper alloy. Hofmann teaches different types of copper containing alloys are provided on a coated substrate (Fig. 7 and Examples). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the alloys of Hofmann with the invention of Kaule so as to provide a golden color coating.

6. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to control the amount of the copper and/or the rest of the metal(s) in the alloy, so as to optimize the appearance of the color of the coating. Even though the thickness of the metallic layer of Kaule is not disclosed, it is taught in Hofmann that it is advantageous to have the thickness within a range of 0.05-1.0 micron (col. 3, line 40 of Hofmann).

7. Furthermore, in [0022] of the current specification, Applicant admits that the use of transmission and/or reflection optical devices for transmission and/or reflection measurement is known to persons skilled in the art. In addition, controlling coating thickness by adjusting heating power and/or path speed is well known before the current invention in the vapor deposition process art. **See col. 7, lines 48-58 of Witzman**, wherein the reference discloses a heater power supply and/or substrate drive are regulated by a control circuit responsive to a coating control monitor that measures

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a property of the coating, which is indicative of the film thickness. This permits the use of source power as well as substrate transport speed (web speed) for temporal control of deposition rate, improving the down web uniformity, without a deterioration in cross web uniformity. Furthermore, Witzman teaches that the evaporation source is constructed and used in a manner that facilitates rapid startup and cool down, thus improving cycle time. This is accomplished by the source having a fast temporal response to changes in input power, permitting continuous control of the deposition rate and providing the economic advantages of a short time for heating up (to the deposition temperature during start-up) and cooling down (for re-loading substrate and/or source material) (col. 7, lines 59-67).

Response to Arguments

8. Applicant's argument is based on that since Kaule's magnetic layer thickness has substantially no influence on coercivity, Applicants submit that it is (obviously) not necessary to exactly control its thickness. This argument is not persuasive for the following reason. Even though, the thickness of the magnetic layer does not affect the coercive property of the layer, there is nothing that teaches that the thickness or the amount of the metallic layer cannot be controlled. Hofmann is combined to teach the use of copper alloy/metallic layer, and controlling the thickness of this layer in order to optimize the appearance of the color of the layer.

9. Furthermore, Applicant argued that Witzman is silent with respect to controlling the color of a deposited coating, and a single component, rather than multicomponents,

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is evaporated in Witzman's process. This argument is not persuasive because Witzman also multicomponent deposition. See col. 7, lines 59-66, where Witzman specially teaches reloading source material which is indicative of controlling coating composition and use of multicomponents.

10. For the above reasons claims 1-14 and 16-36 stand rejected, and claim 37 is included in the rejected.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betelhem Shewareged whose telephone number is 571-272-1529. The examiner can normally be reached on Mon.-Fri. 8:00AM-4:30PM.

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BS
July 8, 2007.



BETELHEM SHEWAREGED
PRIMARY EXAMINER